A regional medical center in the Southeast has a highly evolved atrial fibrillation (AF) program, yet the leadership team recognized the need to further improve outcomes and coordinated care for their AF patients. With the understanding that AF treatment with catheter ablation is more successful earlier in the disease state, they sought to expedite the time from patient diagnosis to treatment.* The medical center partnered with Medtronic process improvement and change management experts to streamline their internal processes and improve access to early treatment.

**The Challenges**
Initial analyses revealed, on average, it took 272 days for AF patients to progress from initial diagnosis to ablation.

Medtronic partnered with the medical center to identify three main barriers to an efficient clinical pathway: **Patient access, procedure scheduling, and lab efficiency.** Together, they developed a plan to condense and streamline the patient pathway and improve efficiencies across the electrophysiology (EP) clinic and the lab.

**The Results**
The team reduced the time from AF diagnosis to catheter ablation from an average of 272 days down to 40 days.† This 232-day reduction in time from AF diagnosis to ablation represents an 85% improvement.

**85% improvement in time from AF diagnosis to ablation**

**Prior to June 30, 2016**, it took an average of 272 days from AF diagnosis to ablation. **From the time improvements were implemented in July 2016 to May 2017**, it took an average of 40 days from AF diagnosis to ablation.

*In the US, AF ablation catheters are approved only for the treatment of drug refractory recurrent symptomatic paroxysmal atrial fibrillation.
†Based on a randomized retrospective chart review of baseline data collected March 23, 2006 to June 24, 2016 compared to post-project data collected July 16, 2016 to May 5, 2017.
This engagement resulted in an annual potential incremental revenue opportunity of $1.8 million.

“The project facilitation was beneficial to gain consensus across teams to improve care for our patients. The unbiased approach resulted in collaboration on improvements and the outcomes exceeded expectations.”
— Director of Electrophysiology

The Solution

PATIENT ACCESS
Medtronic and the medical center established a cross-functional AF Task Force to improve the speed of intervention for patients. The team facilitated meetings with the medical center’s EPs and referring physicians to outline appropriate, guidelines-based AF management. They also added outreach clinic appointments at satellite locations to increase the total number of EP appointments available to new patients. Their efforts resulted in an 87% reduction from time of initial AF diagnosis to first EP consult.

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PROCEDURE SCHEDULING
By standardizing the scheduling process, the team reduced the time from ablation order to procedure completion by 73%. With a dedicated EP scheduler, they introduced same-day scheduling and implemented simple, standardized order sets. They also worked with anesthesia to increase the hospital’s coverage from 2.5 days a week to 5 days a week. This resulted in a 2-day reduction in the time from procedure order to procedure scheduling, and a 29-day reduction from procedure scheduling to the ablation.

LAB EFFICIENCY
Needing to increase lab capacity to treat more patients, the team worked on improving the turnover time between procedures. The hospital hired an EP lab coordinator, cross-trained the lab staff, and optimized the lab’s schedule by blocking similar procedures together. The outcome was a 21% reduction in turnover time, resulting in a 40-minute time savings per day. This additional lab capacity represents a $1.8 million annual incremental revenue opportunity for potential added procedures.

Time from Diagnosis to EP Consult

<table>
<thead>
<tr>
<th></th>
<th>July 2016</th>
<th>May 2017</th>
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<tbody>
<tr>
<td>Time</td>
<td>223</td>
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<td>Reduction</td>
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Time from Ablation Order to Completion

<table>
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<th>December 2016</th>
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<tr>
<td>Time</td>
<td>42</td>
<td>36</td>
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<tr>
<td>Reduction</td>
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EP Lab Turnover Time

<table>
<thead>
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<th>December 2016</th>
<th>June 2017</th>
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<tbody>
<tr>
<td>Time</td>
<td>43</td>
<td>34</td>
</tr>
<tr>
<td>Reduction</td>
<td>21%</td>
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References

This case study is provided for general educational purposes only and should not be considered the exclusive source for this type of information. At all times it is the professional responsibility of the practice to exercise independent judgment in a particular situation. Results may vary.

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